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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/519,046   | 08/19/2005  | Satoshi Murouchi     | AK-481XX            | 6619             |
| 207 7590 07/02/2009<br>WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP<br>TEN POST OFFICE SQUARE<br>BOSTON, MA 02109 |             |                      |                     |                  |
| EXAMINER<br>NELSON, MICHAEL B  |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 1794   |             |                      |                     |                  |
| MAIL DATE  |             | DELIVERY MODE        |                     |                  |
| 07/02/2009   |             | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/519,046

**Applicant(s)**

MUROUCHI ET AL.

**Examiner**

MICHAEL B. NELSON

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendments filed 05/28/09 have been entered. Claims 1, 2 and 4-9 are currently under examination on the merits. The previous new matter rejection is maintained however the previous prior art rejection has been withdrawn. The reasons for withdrawing the prior art rejection are presented in the response to arguments section. Since the same new matter rejection is maintained in this action the action is made final.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

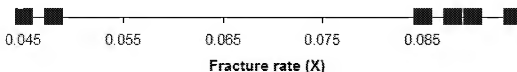
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 2 and 4-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "fracture rate X...is 0.045 to 0.094" is not supporting in the specification as originally filed. While the two discrete endpoints are adequately disclosed, (i.e. in Table 2), one cannot use specific and isolated examples to draw support for the much broader limitation of a continuous range. For example, a fracture rate of 0.060 would be within the scope of the limitation in question and yet there is clearly no disclosure in the specification as filed to support this fracture rate.

***Response to Arguments***

4. Applicant's arguments filed on 05/28/09, related to the new matter rejection, have been considered but are not persuasive. Regarding the arguments directed towards the prior art, while the examiner maintains that the Vectra LCP of the Walpita et al. reference do in fact possess the instantly claimed viscosity limitations, there is not enough evidence in the reference (i.e. Table 2) to provide a showing that the fracture rate of the glass balloons inherently falls within the claimed range. As such this limitation is not taught by the reference.
5. Regarding applicant's arguments against the new matter rejection, the examiner maintains that the data points provided in the specification are not adequate disclosure to allow the applicant to claim the entire range between the lower and upper most endpoints.
6. The examiner does not argue against the case law provided by the applicant. The examiner agrees that new matter issues are determined on a case by case basis depending on what one having ordinary skill in the art can derive from the original disclosure. The examiner also does not contend that, in general, discrete data points can, in certain specific cases, be reasonably taken by one having ordinary skill to disclose a continuous range. However, using the reasoning of one having ordinary skill in the art and assessing this particular case on its merits without applying any "broadly articulated rules" the examiner still contends that the six data points do not adequately disclose the applicant's claimed range.
7. Looking at the actual data presented by the applicant to provide support for the range, one can see that significant portions of the range are not represented by the data points due to their uneven distribution. The claimed range is from 0.045 to 0.094 and the six data points which are meant to provide disclosure for that range are: [0.045; 0.048; 0.085; 0.088; 0.090; 0.094]. When

the data is depicted on a number line below it is readily apparent that the data points are disproportionately clustered around the endpoints of the range:



8. The portion of the range lying between 0.05 and 0.08 is not represented by any data points and represents a significant amount of the entire claimed range (@ 60%). Given the lack of experimental data points within this middle section of the claimed range it is unclear if the ability to produce fracture rates between 0.05 and 0.08 was within the possession of the inventors at the time of the invention. As such, applicant has not provided adequate written description to provide support for claiming a fracture rate of between 0.045 and 0.094.
9. Regarding applicant's other arguments related to the new matter rejection, the examiner agrees that the specification as originally filed shows the importance of a low fracture rate in order to obtain the desired dielectric constant. Likewise, the examiner agrees that each of the data points provided meet the required low (i.e. less than 3) dielectric constant limitation. The examiner also agrees that the fracture rate parameter was a known term in the art. However none of these lines of arguments are relevant to the issue at hand (i.e. would one having ordinary skill in the art determine that the data points provide support for the claimed range). Specifically, the data points do not provide a reasonable basis for determining if the fracture rate in the middle of the range (i.e. 0.05 to 0.08) were possible at the time of the invention or, if they were in the possession of the inventor, if the fracture rates within this part of the claimed range would also exhibit the claimed beneficial properties.

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

/MN/  
06/26/09